

Notice of Allowability

Application No.

10/652,938

Examiner

Krishnan S. Menon

Applicant(s)

WATZELE ET AL.

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE, 8/31/06.
2. ☒ The allowed claim(s) is/are 1-3 and 6-17; RENUMBERED 1-15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Marilyn Amick on 9/15/06.

The application has been amended as follows: Claims were amended; list of amended claims appear starting on a fresh page below.

Claims 1-3 and 6-17 are allowed.

The following is an examiner's statement of reasons for allowance:

The closest prior arts are Schels, Manns and Wolf, with Manns and Wolf teaching multiwell equilibrium dialysis plates, and Schels teaching a dialysis membrane cell having similar mechanical construction. The claims as now amended overcome the references because of the closed language for the clamping of the membrane between the two mounting surfaces. Schels require a set of pins on the mounting surface to hold the membrane in position for clamping. Applicant's invention eliminates that pin, which may not be obvious to one of ordinary skill in the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Amended Claims List

1. (Currently amended) A multichamber microdialysis device comprising

a plurality of sample chambers in close side by side arrangement, said sample chambers being defined by circumferential side walls having a first open end for taking up liquid samples into the sample chamber and a second open end providing an exchange opening, and

a dialysate chamber for taking up a dialysate liquid,

wherein the exchange opening of each sample chamber is covered with a separate semipermeable membrane fixed liquid-tight to the circumferential side walls of the sample chamber in such a manner to provide a diffusion exchange between the sample chamber and the dialysate chamber when the second end of the sample chamber is placed in contact with the dialysate liquid, and

wherein a peripheral marginal section of each semipermeable membrane is clamped between a front face of the circumferential side wall of the sample chamber and a fixing part, wherein each fixing part comprises a ring-shaped portion presenting a circumferential mounting region and an annular wall extending from the perimeter of the ring-shaped portion, the diameter of said annular wall selected to allow frictional engagement of the annular wall with the circumferential side walls of the sample chambers, wherein the outer diameter of a region where the annular wall frictionally engages the circumferential side walls exceeds the sample chamber diameter by not more than 3 mm, the front face of the side wall ~~comprising~~ consisting of an opposing ring-shaped circumferential mounting region wherein one of the mounting regions ~~comprises~~ consists of a surface and a circumferential groove and the other mounting region ~~comprises~~ consists of a surface and a protruding rib fitting into the groove,

by which the membrane is pressed into the groove at its peripheral marginal section and clamped between the ring-shaped circumferential mounting region and the opposing ring-shaped circumferential mounting region.

2. (Previously presented) The multichamber microdialysis device of claim 1, wherein each semipermeable membrane has an exchange surface area less than 50 mm².
3. (Previously presented) The multichamber microdialysis device of claim 1, wherein the sample chambers are each in liquid exchange contact with only one of a plurality of dialysate chambers via its exchange opening, and each dialysate chamber is in liquid exchange contact with only one sample chamber.
4. (Cancelled)
5. (Cancelled)
6. (Previously presented) The multichamber microdialysis device of claim 1, wherein the first end of each sample chamber is in contact with a common dialysate chamber via their respective exchange openings.
7. (Previously presented) The multichamber microdialysis device of claim 6, wherein the membranes of the sample chambers which are in liquid exchange contact with a common dialysate chamber are fixed by means of a plurality of said fixing parts linked together and spaced to allow the simultaneous attachment of the linked fixing parts to the second end of the sample chambers.
8. (Previously presented) The multichamber microdialysis device of claim 1, wherein the semipermeable membrane comprises cellulose acetate or regenerated cellulose.

Art Unit: 1723

9. (Previously presented) The multichamber microdialysis device of claim 1, wherein the device comprises at least 8 sample chambers.
10. (Previously presented) The multichamber microdialysis device of claim 1, wherein the device comprises at least 48 sample chambers.
11. (Previously presented) The multichamber microdialysis device of claim 1, wherein the device comprises at least 96 sample chambers.
12. (Previously presented) The multichamber microdialysis device of claim 1, wherein the distance between the center of the first open end of each sample chamber to the center of the next adjacent sample chamber is about 9 mm.
13. (Previously presented) The device of claim 1 wherein a limiting surface of the fixing part is adjacent to an exchange surface and has at least a partial conical shape whereby the diameter of the exchange opening increases towards the dialysate chamber.
14. (Previously presented) The device of claim 1 wherein the dialysate chamber is formed by a trough into which the circumferential side walls protrude.
15. (Previously presented) The device of claim 14 wherein the interior surface of the fixing part annular wall is fixed to the outer surface of the circumferential sidewalls of the sample chambers by frictional press fit connection.
16. (Previously presented) The multichamber microdialysis device of claim 1 wherein each semipermeable membrane has an exchange surface area of about 20 mm².
17. (Currently amended) A multichamber microdialysis device comprising

a plurality of sample chambers in close side by side arrangement, said sample chambers being defined by circumferential side walls having a first open end for

Art Unit: 1723

taking up liquid samples into the sample chamber and a second open end providing an exchange opening, and

a dialysate chamber for taking up a dialysate liquid,

wherein the exchange opening of each of the sample chambers is covered with a separate semipermeable membrane fixed liquid-tight to the circumferential side walls of the sample chamber in such a manner to provide a diffusion exchange between the sample chamber and the dialysate chamber when the second end of the sample chamber is placed in contact with the dialysate liquid,

wherein a peripheral marginal section of each semipermeable membrane is clamped between a front face of the circumferential side wall of the sample chamber and a fixing part, wherein each fixing part comprises a ring-shaped portion presenting a circumferential mounting region and an annular wall extending from the perimeter of the ring-shaped portion, and the front face of the side wall ~~comprises~~ consists of an opposing ring-shaped circumferential mounting region, wherein one of the mounting regions ~~comprises~~ consists of a surface and a circumferential groove and the other mounting region ~~comprises~~ consists of a surface and a protruding rib fitting into the groove by which the membrane is pressed into the groove at its peripheral marginal section and clamped between the ring-shaped circumferential mounting region and the opposing ring-shaped circumferential mounting region, and

wherein a surface of the ring-shaped portion of the fixing part facing the dialysate liquid has at least a partial conical shape whereby the diameter of the exchange opening increases towards the dialysate chamber.

18. (Cancelled)

Art Unit: 1723

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Krishnan S Menon
Examiner
Art Unit 1723